M019: Mountain Casualty Evacuation

TSP Number/Title	M019: Mountain Casualty Evacuation
Effective Date	Implement next class iteration upon receipt
Supersedes TSP(s)/Lessons	None
TSP User	The following courses use this TSP: Mountain Instructor Qualification Course (MIQC) Basic Mountaineering Course (BMC) Assault Climber Course (ACC)
Proponent	United States Army Alaska, Northern Warfare Training Center
Improvement Comments	Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: ATTN: TRAINING ADMINISTRATOR COMMANDANT USARAK NWTC 1060 GAFFNEY ROAD #9900 FORT WAINWRIGHT AK 99703-9900
Security Clearance/Access	Public domain
Foreign Disclosure Restrictions	The Lesson Developer in coordination with the USARAK NWTC foreign disclosure authority has reviewed this lesson. This lesson is releasable to foreign military students from all requesting foreign countries with Approval of Commandant USARAK NWTC.

PREFACE

Purpose

This training support package provides the instructor with a standardized lesson plan for presenting instruction for:

Task Number	Task Title
XI.0100	Mountain Casualty Evacuation

Technique of Delivery

Lesson Number	Instructional Strategy	Media
M019	Demonstration and Practical Exercise	None

This TSP contains

SECTION I **ADMINISTRATIVE DATA**

All courses including this lesson

Course Number	Course Title
NA	Mountain Instructor Qualification Course
NA	Basic Mountaineering Course
NA	Assault Climber Course

Task(s) Taught or Supported

Task Number	Task Title
XI.0100	Mountain Casualty Evacuation

Task(s) Reinforced

Task Number	Task Title
	Risk Management for Mountain Operations
VII.0200	Tactical Considerations for Cold Weather Operations
VIII.0200	Mountaineering Equipment
VIII.0300	Rope Management and Knots
VIII.0400	Anchors
VIII.0600	Belay Techniques
VIII.0800	Rope Installations

Test Lesson Number

Hours	Lesson Number	Lesson Title
	M020/M021/M022	BMC Mountaineering Review/ACC Mountaineering Review/MIQC Mountaineering Review

Prerequisite Lesson(s)

-M001, Characteristics of Mountain Environment
-M005, Risk Management for Mountain Operations
-M007, Mountaineering Equipment
-M008, Rope Management and Knots
-M009, Anchors
-M011, Belay Techniques
-M013, Rope Installations

References

Number	Title	Date	Additional Information
	NWTC Mountain Operations Manual	FY04	Updated yearly
FM 3-97.6	Mountain Operations	November 2000	http://www.adtdl.army.mil/
FM 3-97.61	Military Mountaineering	August 2002	http://www.adtdl.army.mil/

Student Study Assignment

Read TSP M019

Instructor Requirements

MIQC graduate, TAITC graduate

Additional Support Personnel Requirements

None

Equipment Required

Instructor Equipment

- Mountaineering Helmet
- Rucksack
- Ice Ax

Student Equipment

- Mountaineering Helmet
- Rucksack
- Ice Ax
- Pen and notepad
- Pole less litter
- Skedco
- Stokes Litter

Materials Required

Instructor Materials:

- NWTC Mountain Operations Manual
- Risk Management for Mountain Operations

Student Materials:

- NWTC Mountain Operations Manual
- Risk Management Guide for Mountain Operations

Classroom, Training Area and Range Requirements

Mountaineering training/testing area large enough to facilitate 8 students and SGL. Training area must have adequate routes with hard packed, grassy, scree and talus slopes to facilitate simultaneous movement of 8 students.

Ammunition Requirements

None

Instructional Guidance

Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material.

Branch Safety Manager Approval

NAME	Rank	Position	Date
Mark Gilbertson	**GS-09**	**Training Specialist**	

Proponent Lesson Plan Approvals

NAME	Rank	Position	Date
Peter Smith	**GS-12**	**Training Administrator**	

SECTION II **INTRODUCTION**

Method of instruction: Small Group
Type of instruction: Practical Exercise
Instructor to student ratio: 1:8
Time of instruction: 3 hours
Media used: None

Motivator

Casualty evacuation is difficult under any circumstance. In a mountainous environment this task gets even harder. In addition to casualties inflicted by enemy action, in the mountains, the likelihood of casualties from the environment are significantly increased. Detailed casualty evacuation plans are essential to any military operation. Successful planners of combat action in mountainous terrain have dedicated entire battalions to casualty evacuation and re-supply.

Terminal Learning Objective

ACTION:	Demonstrate knowledge of evacuating a casualty in a mountainous environment
CONDITION:	In mountainous terrain, given necessary equipment
STANDARD:	Demonstrate knowledge of evacuating a casualty in a mountainous environment IAW the NWTC Mountain Operations Manual, FM 3-97.61 and FM 3-97.6.

Safety Requirements

Ensure that students:

- Receive a risk assessment prior to movement to the training area and before practical exercises.
- Have all necessary equipment for the PE's, to include any additional equipment required by the NWTC SOP.
- Have two full canteens and drink adequate water to avoid becoming dehydrated.
- Receive a briefing on the symptoms of heat injury or cold weather injury, as appropriate.

Risk Assessment Level

Determined by instructor

Environmental Considerations

None

Evaluation

You will be evaluated during mountain walking PT and during FTX.

Instructional Lead-in

You have mastered the skills of moving tactically with your units. You will now use these skills in combination with the movement techniques you have learned in this course to properly move casualties on various slopes in a mountainous environment.

SECTION III **PRESENTATION**

ELO A

ACTION:	Describe casualty evacuation principles
CONDITION:	In a field environment, given a pole less litter, modified stokes basket, skedco litter, and climbing rope
STANDARD:	Describe casualty evacuation principles IAW the NWTC Mountain Operations Manual, FM 3-97.61 and FM 3-97.6.

Learning Step/Activity 1 – Considerations

a. The techniques of evacuation are proven techniques. They are, however, all subject to improvement and should be discarded or modified as better methods of handling victims are developed.

1. When evacuating a victim from mountainous areas keep in mind that the purpose of a rescue operation is to save a life, and physical risk to the rescuers must be weighed against this purpose. However, there is no excuse for failing to make the maximum effort within this limitation. Work and expense should be no deterrent when a life is at stake.

2. Rescues will be unplanned (improvised) or planned rescue operations. For a planned rescue, equipment that is especially suited and designed for rescue should be used. For training missions always have a medical plan developed before an emergency arises (plan for the worst and hope for the best). Ensure that the MEDEVAC plan is a comprehensive plan and must be thought out and understood by all that may be involved in a potential rescue.

3. The following actions will be done immediately at the rescue scene:

a. Assume command. One person, and one person only, is overall in charge at all times.
b. Prevent further injuries to the victim and to others. Use reasonable care in reaching the victim.
c. Immediately ensure the victim has an open airway, resume victim's breathing, control serious bleeding, and maintain moderate body warmth. If the victim is unconscious, continually monitor pulse. Protect the patient from environmental hazards.
d. Do not move the victim until you have ascertained the extent of injuries, unless it is necessary to prevent further injuries or the victim is located in a dangerous location (for example, avalanche run-out zone, hanging glacier, possibility of falling rocks).
e. Do nothing more until you have thoroughly considered the situation. Resist the urge for action. Speed is less important than correct action.
f. Decide whether to evacuate with available facilities or to send for help. Speed in getting to a hospital must be balanced against the probability of further injury if working with inexperienced people, lack of equipment or wrong equipment, and terrain at hand.
g. When the evacuation route is long and arduous, a series of litter relay points or stations should be established. These stations must be staffed with the minimum medical personnel to provide proper emergency treatment. When a victim develops signs of shock or worsens while being evacuated, he should be treated and retained at one of these stations until his condition allows evacuation.
h. Helicopters or heated vehicles, if available, should be used for evacuation. While the use of aircraft or vehicles is preferred and can expedite a rescue operation, evacuation of a seriously wounded soldier should never be delayed to await aircraft, vehicle, or a change in weather.

Learning Step/Activity 2 – Planning Rescue Operations

a. Every commander should have a medical evacuation plan before undertaking an operation. This plan should have contingencies included so as not to rely on a single asset. This is especially true in mountain operations where terrain, weather and enemy action can eliminate air evacuation as a means of evacuating casualties.

b. When rescuing a casualty (victim) threatened by hostile action, environmental hazard, or any other

immediate hazard, the rescuer should not take action without first determining the extent of the hazard and his ability to handle the situation. THE RESCUER MUST NOT BECOME A CASUALTY.

c. The rescue team leader must evaluate the situation and analyze the factors involved. This evaluation can be divided into three major steps:

1. Identify the task.
2. Evaluate the circumstances of the rescue.
3. Plan the action.
4. The task must be identified. In planning a rescue, the rescuer tries to obtain the following information:

a. Who, what, where, when, why, and how the situation happened.
b. Number of casualties by precedence (urgent, priority, routine, tactical immediate),
c. Number of casualties by type (litter or ambulatory), and the nature of their injuries.
d. Terrain features and location of the casualties.
e. Tactical situation.
f. If adequate assistance is available to aid in security, rescue, treatment, and evacuation.
g. If treatment can be provided at the scene; if the victims require movement to a safer location.
h. Equipment required for the rescue operation.

d. Circumstances of the rescue are as follows:

1. After identifying the task, relate it to the circumstances of the situation.
a. Are additional personnel, security, medical, or special rescue equipment needed?
b. Are there circumstances, such as aircraft accidents (mass casualties), that may require specialized skills?
c. What is the weather condition?
d. Is the terrain hazardous?
e. How much time is available?

2. The time element may cause a rescuer to compromise planning stages or treatment (beyond first aid). Make a realistic estimate of time available as quickly as possible to determine the action time remaining. The key elements are the casualty's condition and environment.

3. Mass casualties are to be expected on the modern battlefield. All problems or complexities of rescue are now multiplied by the number of casualties. Time becomes the critical element.

4. Considerations for the main rescue group for a planned rescue are as follows:

a. Carry all needed equipment, hot food and drinks, stove, sleeping bags, tents, bivouac sacks, warm clothes, ropes, and stretchers.
b. Prepare the evacuation route (ground transport to hospital, walking trails, fixed lines, lowering lines, anchor points, and rescue belay points). If the victim is airlifted out, attach a paper with the medical actions that were performed on the ground (for example, blood pressure, pulse rate, drugs started, and so on).
c. When performing all rescues, the rescuers are always tied in for safety. With all rescue techniques, remember to think things through logically for safety and to prevent the rescuer from accidentally untying himself or the fallen climber.
d. Constantly inform the casualty (if they are conscious) as to what you are doing and what he must do.

e. The rescue plan should proceed as follows:

1. In estimating time available, the casualties' ability to endure is of primary importance. Age and physical condition may vary. Time available is a balance of the endurance time of the casualty, the situation, and the personnel and equipment available.

2. Consider altitude and visibility. Maximum use of secure, reliable trails or roads is essential.

3. Ensure that blankets and rain gear are available. Even a mild rain can complicate a normally

simple rescue. In high altitudes, extreme cold, or gusting winds, available time is drastically reduced.

4. High altitudes and gusting winds reduce the ability of fixed-wing or rotary-wing aircraft to assist in operations. Rotary-wing aircraft may be available to remove casualties from cliffs or inaccessible sites, and to quickly transport casualties to a medical treatment facility. Relying on aircraft or specialized equipment is a poor substitute for careful planning.

Learning Step/Activity 3 – Mass Casualties

a. When there are mass casualties, an orderly rescue may involve further planning.

1. To manage a mass casualty rescue or evacuation, separate stages are taken.

- FIRST STAGE: Remove personnel who are not trapped among debris or who can be easily evacuated.
- SECOND STAGE: Remove personnel who may be trapped by debris, but whose extraction only requires the equipment on hand and little time.
- THIRD STAGE: Remove the remaining personnel who are trapped in extremely difficult or time-consuming situations, such as moving large amounts of debris or cutting through a wall.
- FOURTH STAGE: Remove dead personnel.

2. Evacuation of wounded personnel is based on the victim's condition and is prioritized as follows:
- PRIORITY ONE: Personnel with life-threatening injuries that require immediate emergency care to survive; first aid and stabilization are accomplished before evacuation.
- PRIORITY TWO: Personnel with injuries that require medical care but speed of evacuation is not essential.
- PRIORITY THREE: Injured personnel who can evacuate themselves with minimal assistance.
- PRIORITY FOUR: The logistics removal of dead personnel.

Learning Step/Activity 4 – Special Training

Before receiving training in basic mountain evacuation, litter teams should receive instruction in military mountaineering and basic first aid. Litter bearers and medics must know the use and care of rope as an item of equipment. The members of litter teams must be proficient in the techniques of belaying and choosing belay points. Proper support and protection must be given to victims and litter bearers when evacuating over steep, difficult terrain.

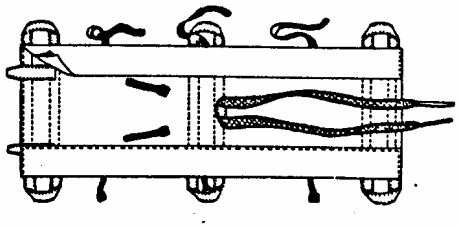
ELO B

ACTION:	Utilize a pole less litter
CONDITION:	In a field environment, given a pole less litter and casualty (simulated)
STANDARD:	Utilize a pole less litter IAW the NWTC Mountain Operations Manual.

Learning Step/Activity 1 – Pole Less Litter

a. Litter non-rigid, Nylon Pole less, NSN 6530-00-783-7510 is best issued to company aidmen, as it is lightweight, easy to carry and readily available. Casualties should be secured with the chest strap and pelvic straps sewn into this litter on one side. This litter should not be used for above ground evacuation techniques such as rappelling, traverse lines and hauling lines in the vertical or horizontal position.

b. The casualty is placed in the center of the litter and the two crotch straps are placed over the thighs and secured to the buckles. The litter can then be carried by a minimum of two or maximum of six personnel.



LITTER NON_RIGID NYLON POLE LESS

1. Is the most versatile for field use. Can be folded and carried by the aid man.

2. Has folds into which improvised poles can be inserted for long distance evacuation.

3. Has slings for carrying and straps for securing the patient.

4. Weight – 3 1/2 pounds

ELO C

ACTION:	Utilize a STOKES litter
CONDITION:	In a field environment, given a stokes litter and casualty (simulated)
STANDARD:	Utilize a STOKES litter IAW the NWTC Mountain Operations Manual.

Learning step/Activity 1- STOKES Litter

a. Casualties may be secured to litters in many different manners depending on the terrain, nature of injuries, and availability of equipment. All casualties must be secured, it is preferred that this be done under medical supervision after stabilization has been finished.

b. Litter Stokes, Modified, NSN 6530-00-181-7767, is best suited for areas where severe casualties will be transported. All other litters may be placed inside of this litter and transported across traverse lines. This litter is rectangular in shape and has no vertical leg divider to accommodate other litters.

1. Designed for use in mountain operations. Affords security for patient when litter is tilted. Can be pulled on ground without injury to patient.

2. Is a steel tubular frame supporting a bed of wire mesh netting with a base of four runner boards.

3. Has four webbing straps.

Overall length:	88 3/4 inches
Width:	22 3/4 inches
Weight:	21 pounds

c. Techniques of securing.

1. If the evacuation route passes over a cliff, descends a steep slope, or if the patient is unconscious, he must be securely lashed to the litter. In securing a patient to a litter, the pelvic bones lend themselves most favorably to being tied since injuries of the leg, abdomen, chest, or arms will not be involved in the procedure.

2. A blanket or other padding is folded over the abdomen. This greatly eases the pressure caused by the sling at the points of contact. Padding should also be placed under the neck, if a neck injury is not suspected under the small of the back and under the knees.

3. If the climate requires, the casualty should be placed inside a sleeping bag.

4. To secure a casualty to a stokes litter, two 25 foot pieces of 1 inch tubular webbing are required.

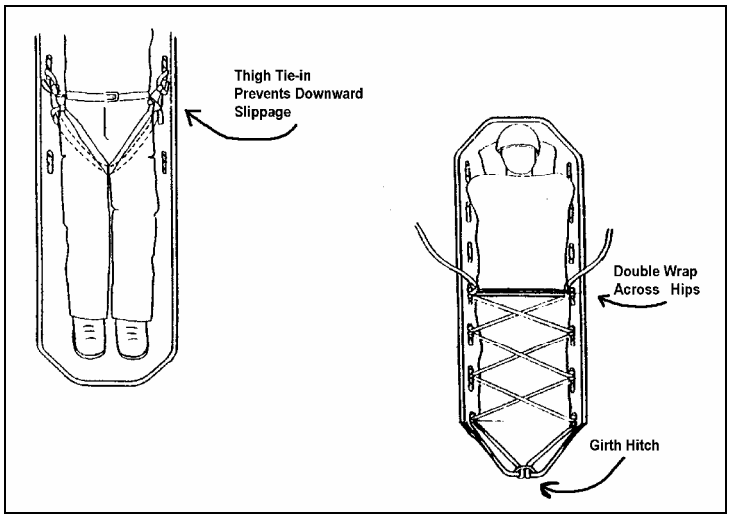
Tie the two pieces of webbing together using a water knot.

5. Girth hitch the webbing to the litter at the foot. Lace the webbing across the litter working towards the head.

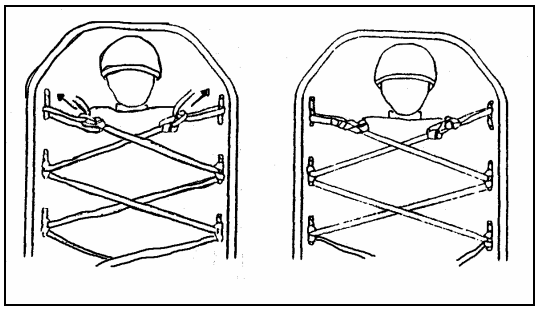
6. Once the waist is reached double lace the webbing across the waist.

7. Lace the webbing all the way to the shoulders, but not across the neck. Establish a transport tightening system. Adjust the webbing to a snug fit working from the feet to the shoulders. Once this is accomplished secure the transport tightening system.
To prevent downward slippage of the casualty do one of the following: If the casualty is wearing a climbing harness secure a carabiner to each side of the harness then to the litter itself. If the casualty is not wearing a harness slide a 5 1/2 foot piece of webbing up each leg and secure it to the litter with a carabiner.

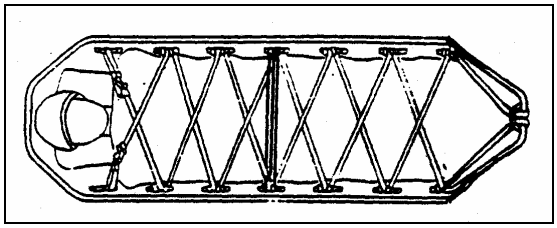
8. All casualties should have their arms secured to prevent them from inadvertently getting caught on terrain.



SECURING PATIENT



Use Transport Tightening System to tighten ropes



PATIENT SECURE

ELO D

ACTION:	Utilize an Oregon spine splint (OSS) and a SKEDCO litter
CONDITION:	In a field environment, given a stokes litter and casualty (simulated)
STANDARD:	Utilize an Oregon spine splint (OSS) and a SKEDCO litter IAW the NWTC Mountain Operations Manual.

Learning step/Activity 1- Immobilize the spine using the Oregon Spine Splint (OSS) The SKEDCO website (www.skedco.com) provides pictorial instruction for the SKEDCO and OSS.

a. Oregon Spine Splint is used to immobilize a potential spine injury.

b. Personnel must be trained in spine care management (EMT level training or equivalent) to use this device. To use the device.

1. Open the **white** Velcro fastener which holds the two center slats together and unfold the two center sections until they are inline. Remove the head straps and place them on the close at hand. The torso flaps remain fastened together to contain all of the other straps for ease of insertion behind the patient. Hold the vest by the still fastened torso flaps.

2. With the back side of the OSS II (the side containing the sewn straps and handles) facing away from the patient's back, hold the OSS II with its lower end below the level of the seat. Insert the OSS II on an angle, head end first, between the arms of the soldier holding the patient's head.

3. Bring the OSS II up into place at the patient's back and straighten it, so that the midline of the OSS II is at the midline of the patient's back. Release the Velcro tabs which hold the two torso flaps together and release the black groin straps from the storage position. Straighten out all of the straps so that they are untangled at each side of the patient.

4. Pass the upper ORANGE strap over the patient's LEFT shoulder. Reach across and bring the lower ORANGE strap under the RIGHT armpit. Close the buckle by inserting and connecting the male and female end of the ORANGE straps. Adjust the strap until snug.

5. Pass the upper GREEN strap over the patient's RIGHT shoulder. Reach across and bring the lower GREEN strap under the LEFT armpit. Close the buckle by inserting and connecting the male and female end of the GREEN straps. Adjust the strap until snug The ORANGE and GREEN straps have formed and "X" over the upper body and is centered and that both the ORANGE and GREEN straps are equally tight.

6. Bring the top GRAY torso straps from the LEFT and RIGHT around the torso and fasten them together. Pull so that they are snug but not overly tight.

7 Bring the lower GRAY torso straps (GRAY straps with BLACK buckle parts) from the LEFT and RIGHT around the lower torso and fasten them together.

8. Next, take the LEFT long groin strap (BLACK strap with WHITE male buckle) and pass it under the

LEFT leg just proximal to the knee Be sure that it is not twisted. Fasten the buckle and pull the strap snug.

9. Repeat this process with the RIGHT groin strap

Learning Step/Activity 2 – Utilize a SKEDCO

a. Unroll SKEDCO and place next to patient.

b. Casualty is placed on litter with arms at sides (unless injured).

c. Four body straps are used to secure the patient to the litter.

d. Feet straps are secured last with straps running around the outside of feet.

Learning step/Activity 3 – Rig for horizontal ascent/descent

a. Insert head strap, (head strap is shorter) through lift slot, pass under sled and through slot on other side.

b. Insert foot strap (foot strap is longer) through lift slot, pass under sled and through slot on other side.

c. Equalize both straps and secure to large locking steel carabiner.

Learning step/Activity 4 – Rig for vertical ascent/descent

a. Tie figure eight knot at center of the 30 ft. rope and pass the ends through the grommets at the head end of the sled

b. Pass the rope through all remaining grommets and carry handles all the way to the foot end.

c. Pass the rope through the grommets at the foot end from the inside out. Tie with a square knot.

d. Pass the rope over the end of the sled and through the carry handles and secure with a square knot finished with overhand knots.

e. Attach a large steel locking carabiner to the loop on the head end.

ELO E

ACTION:	Ascend and descend a slope with a litter
CONDITION:	In a field environment, given a litter and casualty (simulated) secured for transport
STANDARD:	Ascend and descend a slope with a litter

Learning step/Activity 1- Ascend and Descend a slope with a litter

a. Rescue can be necessary at any time during mountain operations. The size of the group in the mission will determine the type of rescue performed. With rope techniques given earlier in this text and sufficient personnel, an ascent of a moderately steep slope can be performed easily.

1. Ascending: The rope should anchored above and a belay setup. Personnel should be used at the top and the bottom. Personnel at the top belay and pull the rope and the patient up. Personnel at the bottom are used at the bottom to lift the patient off the terrain and move him upward. It may take up to four at the bottom to prevent the litter form snagging or bouncing.

2. Descending can be performed similar to ascending except the lifting will not be as significant. Litter bearers will be required to keep the litter upright and prevent it from snagging or bouncing.

b. For vertical raising or lowering systems refer to M013e, A-Frame/Suspension Traverse and M013f, Vertical Haul Line. For raising or lowering a casualty using these systems, at least one additional individual can be belayed with the casualty. This individual can assist in moving the casualty over difficult

sections of rock while monitoring the casualty.

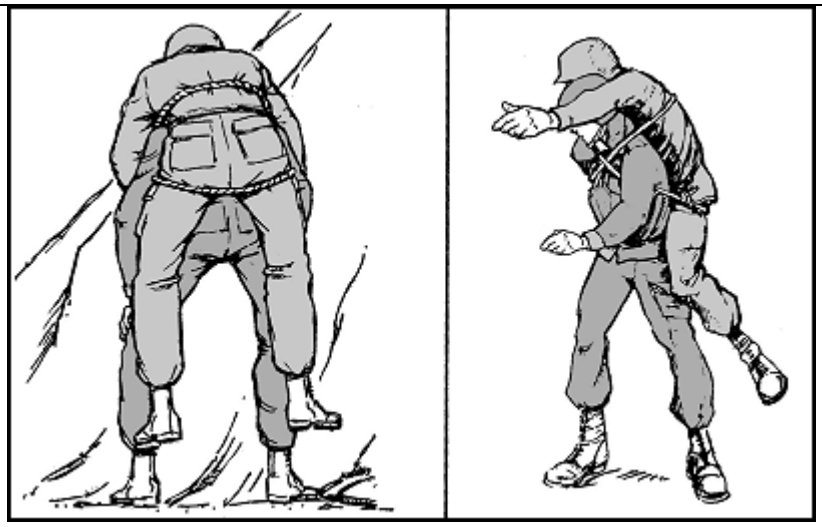
ELO F

ACTION:	Demonstrate the buddy rappel
CONDITION:	In a field environment, given a casualty (simulated) and mountaineering equipment
STANDARD:	Demonstrate the buddy rappel IAW the NWTC Mountain Operations Manual and FM 3-97.61.

Learning Step/Activity 1 – Buddy Rappel

a. Buddy Rappel**.** The rescuer can conduct a seat-hip rappel with a victim secured to his back. In this case, the rappeller faces the cliff and assumes a modified L-shape body position to compensate for the weight of the victim on his back. The victim is top-rope belayed from above, which provides the victim with a point of attachment to a secured rope. The methods for securing a victim to a rappeller's back are described below.

1. To secure the victim to the carrier's back with a rope, the carrier ties a standard rappel seat (brake hand of choice, depending on the injury) and rests his hands on his knees while the victim straddles his back.
2. A 16-foot sling rope is used. A 12 inch tail of the sling is placed on the victim's left hip. (This method describes the procedure for a seat-hip rappel with right-hand brake.)
3. The remaining long end of the sling rope is routed under the victim's buttocks, and passed over the victim's and carrier's right hip. The rope is run diagonally, from right to left, across the carrier's chest, over his left shoulder, and back under the victim's left armpit.
4. The rope is then run horizontally, from left to right, across the victim's back. The rope is passed under the victim's right armpit and over the carrier's right shoulder.
5. The rope is run diagonally, from right to left, across the carrier's chest and back across the carrier's and victim's left hip.
6. The two rope ends should now meet. The two ends are tied together with a square knot and overhand knots.
7. The knot is positioned on the victim's left hip. The carrier's shoulders may need to be padded to prevent cutting by the rope.
8 An alternate method is to use two pistol belts hooked together and draped over the carrier's shoulders. The victim straddles the carrier, and the belay man secures the loose ends of the pistol belts under the victim's buttocks. Slack in the pistol belt sling should be avoided, since the carrier is most comfortable when the victim rests high on his back (see FM 8-35).
9. A large rucksack can be slit on the sides near the bottom so that the victim can step into it. The victim is belayed from the top with the carrier conducting a standard rappel. The carrier wears the rucksack with the victim inside.
10. A casualty secured to a carrier, as described above, can be rappelled down a steep cliff using a seat-shoulder or seat-hip rappel. The casualty's and rappeller's shoulders should be padded where the sling rope and rappel lines cross if a seat-shoulder rappel is used. The buddy team should be belayed from above with a bowline tied around the victim's chest under his armpits. The belay rope must run over the rappeller's guide hand shoulder.



ELO G

ACTION:	Utilize field expedient litters
CONDITION:	In a field environment, given a litter and casualty (simulated) secured for transport
STANDARD:	Utilize field expedient litters IAW the NWTC Mountain Operations Manual.

The following litters and methods of evacuation are improvisations using materials, which would generally be carried by units operating in mountainous terrain.

Learning Step/Activity 1- Mountain Coil Carry

a. The mountain coil carry requires one bearer and at least 25 feet of rope, but a rope 100 feet or longer would make the task easier on the bearer and the casualty:

1. The casualty is first positioned on his back. Separate the loops, dividing the mountain coil into two equal groups. Slip one-half of the coil over the casualties left leg and one half of the coil over the casualties right leg so that the wraps holding the coil are at the level of the lower abdomen, the loops extending upward toward the armpits.

2. The bearer lies on his back between the casualty's legs and slips his arms through the loops of the coil as if he were putting on a rucksack. Grasping the casualty's arms, the bearer rolls over, rolling to the casualty's uninjured side, pulling the casualty on top of him. Holding the casualty's wrists the bearer carefully stands, using his legs to lift up and keep his back as straight as possible.

3. A sling rope should be tied around both the bearer and casualty at chest level to aid in keeping an unconscious casualty upright. This also prevents the coils from slipping off the bearer's chest.

4. A similar back carry can be conducted utilizing nylon webbing to distribute the casualty's weight. The set up is the same as for the mountain coil carry. It should be stressed that these carry methods should not be used for casualties with head, neck, or back injuries Suspected internal, or injuries requiring constant monitoring will require evacuation by ridged litter.

Learning Step/Activity 2 – Rope Litter

a. A rope litter is a field expedient litter prepared using one rope. It requires 20 to 30 minutes to prepare and should be used only when other materials are not available.

1. Make 24 bights about 18 inches long from the rope starting in the middle of the rope so that two people can work on the litter at once.

2. With the remainder of the rope make a clove hitch over each bight. Each clove hitch should be approximately 6 inches apart when the litter is complete.

3. Line the litter with padding such as clothing, sleeping bag, or poncho liner.

4. Pass the remainder of the rope through the bights outside of the clove hitches. Dress the clove hitches down toward the closed end of the bight to secure the litter and tie off the ends of the rope with clove hitches.

5. Four to six bearers are required to transport a casualty using this method.

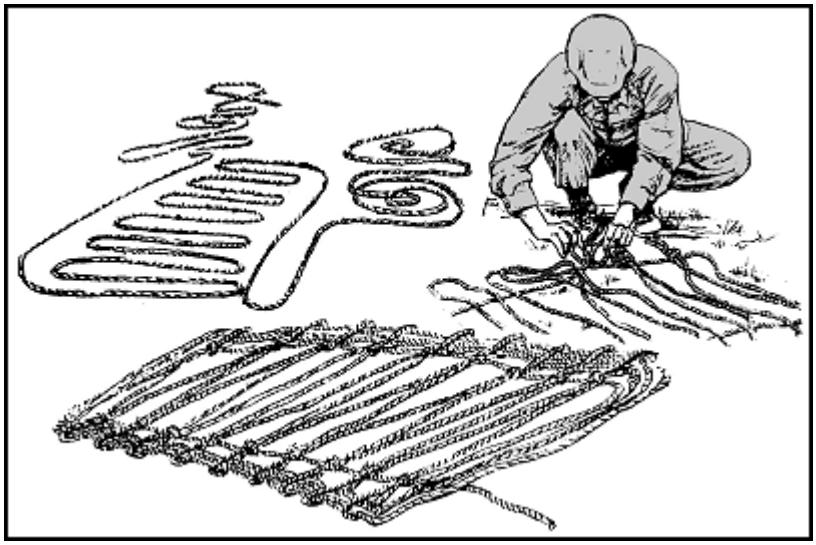
6. The rope litter can be made more stable by adding poles.

a. After placing the clove hitches over the bights, slide them in 6 inches.

b. With two poles approximate 6 feet long and 2 inches in diameter, slide the poles down through the bights on each side.

c. Dress the clove hitches down against the poles.

d. Take two spreader poles and tie them off across the head and foot of the litter with the remaining tails of the climbing rope.



Learning Step/Activity 3 – Other expedient methods

a. Based on materials available and the location there are many other field expedient litters that can be utilized. A satisfactory litter can be made from items such as blankets, poncho, poncho liner, shelter half, tarpaulin, jacket, etc. If you are in a mountainous area where a horse or other similar pack animal is available, a travois can be lashed together and drug along behind the animal.

ELO H

ACTION:	Utilize a nine line air MEDEVAC request
CONDITION:	In a field environment, given a litter and casualty (simulated) secured for transport
STANDARD:	Utilize a nine line air MEDEVAC request IAW the NWTC Mountain Operations Manual.

Learning step/Activity 1- Utilize a nine line MEDEVAC

1. Location of Pickup Site
2. Radio Frequency & Call Sign
3. # Patients by Precedence

(Type & Severity of Wound, Injury, or Illness)
4. Special Equipment Required
5. Number of patients
L- Litter A- Ambulatory
6. Security at pick-up site
N – No enemy troops in area
P- Possible enemy troops in area (caution)
E- Enemy troops in area (caution)
X-Enemy troops in area (escort required)
7. Method of Marking pick-up site:
8. Patient nationality and status
9. NBC Contamination:
N-Nuclear B-Biological C-Chemical

SECTION IV **SUMMARY**

Check on Learning

a. What are two expedient methods of evaluating casualties?

Mountain Coil carry and the rope litter

b. Explain how to rig the SKEDCO for a vertical ascent.

Tie figure eight knot at center of the 30 ft. rope and pass the ends through the grommets at the head end of the sled; Pass the rope through all remaining grommets and carry handles all the way to the foot end; Pass the rope through the grommets at the foot end from the inside out. Tie with a square knot; Pass the rope over the end of the sled and through the carry handles and secure with a square knot finished with overhand knots.; Attach a large steel locking carabiner to the loop on the head end.

c. Explain how to rig a SKEDCO for a horizontal ascent.

Insert head strap, (head strap is shorter) through lift slot, pass under sled and through slot on other side; Insert foot strap (foot strap is longer) through lift slot, pass under sled and through slot on other side; Equalize both straps and secure to large locking steel carabiner.

Review and Summarize Lesson

ACTION:	Demonstrate knowledge of evacuating a casualty in a mountainous environment
CONDITION:	In mountainous terrain, given necessary equipment
STANDARD:	Demonstrate knowledge of evacuating a casualty in a mountainous environment IAW the NWTC Mountain Operations Manual, FM 3-97.61 and FM 3-97.6.

Transition to next lesson

As per the NWTC training schedule; dependent upon the course in conduct

SECTION V	STUDENT EVALUATION
Testing Requirements	**Students will be tested on this task during the written test as per the NWTC training schedule for this course.**
Feedback Requirement	**Students will receive two opportunities to pass each event tested. Re-training will be conducted for students that fail the first iteration of testing. Refer to M020 for specifics.**